

**Exhibit 10**  
**Apportionment Assessment of Patent '520**  
**Play execution**

**Patent Functionality**

- "The '520 patent invention uses simulation, or so-called "play execution," to recognize sequences of bytecode instructions that perform static array initialization [...] The bytecode to initialize a big array is lengthy and inefficient. This is a property of the class file format that is specified in the Java Virtual Machine Specification. Because Google chose to have Android use existing Java compilers that compile to class files, rather than writing its own compiler to compile to its .dex file format, Google was stuck with this property of class files. When Android packages the information in the many class files making up an application into a single .dex file, it replaces the lengthy array initialization code in the class file with a reduced set of instructions and the exact data to be placed in the array."

[1]

**Contemporaneous Evidence**

- In one video presentation Google's Dan Bornstein explains Google's use of this patented feature: "sometimes you really need to have just a big array of data and if you've ever looked at what something like this looks like ... in a .class file, it's not pretty." He goes on to demonstrate that "[t]his is the same code, turned, which has been translated into a .dex file. ... this is both a speed and a, a space efficiency win. Measured on our system libraries it saves us something like a 100K."

[2]

**Opinion**

- Up to 1% apportionment
- Estimated patent damages after U.S. adjustment: up to \$6.7 million

**Sources:**

- [1] Mitchell Patent Report, p. 35.
- [2] Google I/O 2008 Presentation entitled "Dalvik Virtual Machine Internals" at Slides 9, presented by Dan Bornstein, available at <http://sites.google.com/site/io/dalvik-vm-internals/2008-05-29-Presentation-Of-Dalvik-VMInternals.pdf?attredirects=0> ("Dalvik Presentation").